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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/661,967	09/14/2000	Ying Feria	PD-200108	9890

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HUGHES ELECTRONICS CORPORATION
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EXAMINER

LEI, TSULEUN R

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 07/30/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/661,967

Applicant(s)

FERIA ET AL.

Examiner

TSULEUN R. LEI

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ibanez-Meier et al. (U.S. Patent 6,151,308) in view of Mesecher et al. (U.S. Patent 6,289,004).

Regarding Claim 1, Ibanez-Meier teaches a communications system comprising: stratospheric platform (Fig.1, Communication Platform 110) having a payload controller (Fig.3, Processor 310) and a phased array antenna having a plurality of elements for generating a first beam and a second beam (Fig.1); a gateway station in communication with said stratospheric platform (Fig.1, Destination Device 120-122, and Col.4, Line 64, communication gateways), said gateway station receiving a first signal having the first beam having interference from the second beam therein and receiving a second signal having the second beam having interference from the first beam therein (Col.16, Lines 53-55). Ibanez-Meier does not teach how the interference can be reduced or removed. Mesecher, however, teaches that the gateway station comprising a first

Art Unit: 2686

subtracting block for subtracting said second signal from said first signal to obtain the first beam; said gateway station comprising a second subtracting block for subtracting said first signal from said second signal to obtain a second beam (Mesecher, Col.2, Lines 3-18; and Fig.10, subtracting block 149; Although only one subtracting block is shown, it is inherent that by reversing the operation, signal from the narrow beam direction antenna can be improved by subtracting the signal from the main antenna from that of the narrow beam antenna). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to combine the teaching of Mesecher to that of Ibanez-Meier, so that communication channels could be more reliable when using the stratospheric platform structure.

Regarding Claim 2, Ibanez-Meier as modified by Mesecher teaches a communications system as recited in claim 1 wherein said gateway station weights said second signal with a first weight prior to subtracting said second signal from said first signal (Mesecher, Col.2, Lines 8-11).

Regarding Claim 3, Ibanez-Meier as modified by Mesecher teaches a communications system as recited in claim 1 wherein said gateway station weights said first signal with a second weight prior to subtracting said second signal from said first signal (Mesecher, Col.2, Lines 8-11; Fig.10 where a factor of 1 is used for the first signal.).

Regarding Claim 4, Ibanez-Meier as modified by Mesecher teaches a communications system as recited in claim 2 wherein said first weight is a function of user position files

Art Unit: 2686

(Mesecher, Col.4, Lines 16-29, wherein proper weights are obtained adaptively, where adaptive variation as a function of user position file is inherently implied.).

Regarding Claim 5, Ibanez-Meier as modified by Mesecher teaches a communications system as recited in claim 1, wherein the payload controller comprises a demultiplexer for receiving control signals (Mesecher, Col.3, Line 26).

Regarding Claim 6, Ibanez-Meier as modified by Mesecher teaches a communications system as recited in claim 5, wherein the demultiplexer generates a plurality of element control signals (Mesecher, Col.3, Lines 24-28).

Regarding Claim 7, Ibanez-Meier as modified by Mesecher teaches a communications system as recited in claim 6, wherein the element control signals are coupled to an RF feed, and the RF feed is coupled to said plurality of elements of said phased array antenna (Ibanez-Meier, Col.6, Lines 43-45).

Regarding Claim 8, Ibanez-Meier as modified by Mesecher teaches a communications system as recited in claim 1, wherein the gateway station comprises a beam generator for generating beam signals (Ibanez-Meier, Col.6, Lines 45-49, wherein device interfaces enable the generation of a beam which has a dynamically-shapeable geometry.).

Art Unit: 2686

Regarding Claim 9, Ibanez-Meier as modified by Mesecher teaches a communications system as recited in claim 1, wherein said gateway station further comprises a multiplexes/demultiplexer (Mesecher, Col.3, Line 26).

Regarding Claim 10, Ibanez-Meier as modified by Mesecher teaches a communications system as recited in claim 9, wherein said multiplexes/demultiplexer comprises a code division multiplexes/demultiplexer (Mesecher, Col.2, Line 22).

Regarding Claim 11, Ibanez-Meier as modified by Mesecher teaches a communications system as recited in claim 1, wherein said gateway station is coupled to a terrestrial network (Ibanez-Meier, Col.8, Lines 49-56).

Regarding Claim 12, Ibanez-Meier as modified by Mesecher teaches a communications system as recited in claim 11, wherein said terrestrial network comprises the Internet (Ibanez-Meier, Col.14, Line 50).

Regarding Claim 13, Ibanez-Meier as modified by Mesecher teaches a communications system as recited in claim 11, wherein the terrestrial network comprises the public service telephone network (Ibanez-Meier, Col.8, Lines 49-56, where terrestrial network usually includes a public service telephone network).

Regarding Claim 14, see Claim 1 for the teaching of Ibanez-Meier and Mesecher.

Regarding Claim 15, see Claims 2 and 3 for the teaching of Ibanez-Meier and Mesecher.

Regarding Claim 16, see Claim 1 for the teaching of Ibanez-Meier and Mesecher.

Regarding Claim 17, see Claim 4 for the teaching of Ibanez-Meier and Mesecher.

Regarding Claim 18, see Claims 1-3 for the teaching of Ibanez-Meier and Mesecher.

Regarding Claim 19, see Claim 4 for the teaching of Ibanez-Meier and Mesecher.

Regarding Claim 20, see Claim 1 for the teaching of Ibanez-Meier and Mesecher.

Regarding Claim 21, see Claims 2 and 3 for the teaching of Ibanez-Meier and Mesecher.

Regarding Claim 22, Ibanez-Meier and Mesecher teach a method as recited in claim 21, wherein said at least one signal is associated with a mobile user (Ibanez-Meier, Fig.15).

Regarding Claim 23, Ibanez-Meier and Mesecher teach a method as recited in claim 22, wherein said at least one other of said plurality of signals is associated with a mobile user (Ibanez-Meier, Fig.15).

Art Unit: 2686

Regarding Claim 24, see Claim 4 for the teaching of Ibanez-Meier and Mesecher.

Response to Amendment

3. The amendment filed on 5/5/03 under 37 CFR 1.131 has been considered but is ineffective to overcome the Ibanez-Meier and Mesecher references.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Conclusion

Art Unit: 2686

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TSULEUN R. LEI whose telephone number is 703-305-4828. The examiner can normally be reached on 8:30 to 5:00.

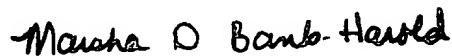
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D Banks-Harold can be reached on 703-305-4379. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5403 for regular communications and 703-308-5403 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



TRL

July 23, 2003



MARSHA D BANKS-HAROLD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600